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EXAMINER

NOBAHAR, ABDULHAKIM

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/678,933

Applicant(s)

MARTIN ET AL.

Examiner

Abdulhakim Nobahar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. This communication is in response to applicants' amendment received on August 16, 2004.

2. It is acknowledged that the amendments to claims 1 and 22 do not introduce new matter.

3. Applicants' arguments have been fully considered but they are not persuasive.

4. Applicants argue as follows:

4.1 Regarding claim 1, in the last two paragraphs of page 8 of the Remarks, applicants argue that the following are not anticipated by the cited references:

“in said shared computer system, said shared computer system comprising an application service provider”.

Referring to Fig. 1, McNeil discloses shared computer systems such as the network 110 or any of the domains 116P, 116Q, 116R and 116S. Any individual computer device in these domains corresponds to an application provider or could provide other services to any station in another domain or to a client in the Internet 170.

“associating said at least one virtual private network connections with a plurality of virtual local area networks”.

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Referring to Fig. 2, McNeil discloses a plurality of virtual local area networks that can have connections to clients in the Internet 170. Ahmad, on the other hand, discloses a system to support multiple virtual private networks (VPNs) in a public network by connecting customers in different premises to service providers through private paths (see abstract; figs. 2-4 and 7-9; col. 4, lines 8-42; col. 10-42). A person with ordinary skill in the art would be motivated to implement the teaching of Ahmad with the system of McNeil in order to associate at least one customer's VPN in the Internet 170 in Fig. 2 of McNeil with the plurality of VLANs in any of domains 116P, 116Q and 116P to provide private links between customers and the service providers.

"associating at least one of said computer resources in said shared computer system with each of said plurality of virtual local area networks, whereby a domain for each of said plurality of client computers is extended to include said computer resources in said application service provider and said plurality of client computer domains are isolated from each other within said application service provider." And

"McNeill therefore does not disclose or suggest the claimed shared computer system in which multiple client domains are extended and isolated. Similarly, Ahmed does not disclose a shared computer system in which multiple client domains are extended and isolated."

Referring to Fig. 2, McNeil discloses a plurality of virtual local area networks (VLANs) in each domains 116P, 116Q and 116P. Each VLAN

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comprises at least one computer device that could serve as an application provider over the Internet 170 to a client. As stated above a person with ordinary skill in the art would be motivated to combine the teaching of Ahmad in the system of McNeil. In such a combined system when a client computer is connected through a secure private VPN over the Internet to any resources on any computer devices in any of the VLANs would form a private and secure circuit that would include the client computer and the said resource. Also Ahmad teaches and end-to-end virtual channel connections in a VPN service that connections are private i.e., isolated from each other (Ahmad, abstract; col. 3, lines 64-67; col. 4, lines 14-30). Furthermore, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

4.2        Regarding claim 16, on page 9 of the Remarks, applicants argue that the cited references do not disclose or suggest:

“... a configuration engine electrically connected to said at least one virtual local area network switch, said configuration engine comprising computer readable program code for configuring said at least one virtual local area network switch to changeably connect each of said plurality of virtual private network

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connections to at least one of said plurality of computer resources while isolating said plurality of virtual private network connections from one another."

McNeil discloses a management station corresponding to the recited configuration engine connected to at least one switch in order to configure the switches and establishes connectivity between a computer device containing resources in a domain such as 116P and a computer over the Internet 170 (see Fig.1, Domain 116P, Station 124M; col. 2, lines 35-50; col. 4, lines 9-11 and lines 38-41; col. 5, lines 1-14). Furthermore, when the teaching of Ahmad combined with the system of McNeil, as stated above, the management station will facilitate the connections of VPNs to the computer resources on the computers located in any of the VLANs while isolating the connections from each other.

4.3        Regarding claim 22, on page 11 of the Remarks, applicants argue that the cited references do not disclose or suggest:

"a plurality of computer resources within an application service provider; means for securely connecting each of a plurality of client computers to a portion of said plurality of computer resources in said application service provider while isolating said portion of said plurality of computer resources from a second portion of said plurality of computer resources."

Regarding the above argument, the same is applied as stated above with respect to the like elements of claim 1 and 16.

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5. In light of the above submission the previous rejection of the claims is maintained with consideration of the amendments to claims 1 and 22 as follows.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 09/584252. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of this application are broader than the claims 1-20 of copending application. These claims do not expressly specify that a virtual local area network switch having a plurality of ports for connecting each client to at least one of the plurality of computer resources as recited in independent claims 1 and 13 of the co-pending application. These claims recite that a virtual private network (VPN) terminal device (corresponding to the recited switch) securely connecting a plurality of

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client computers to a plurality of virtual local area network (VLAN) in order to access resources on at least one of the computers in one of the plurality of VLANs. The combined limitations of claims 1, 2, and 5 of the pending application correspond to the limitations of claim 1 in the co-pending application. The pending claim 1 recites that each of the plurality of client computers is associated with at least one virtual private network connection, wherein the client computers are remotely connected to at least one virtual private network termination device, and wherein said at least one virtual private network connection is established by said at least one virtual private network termination device. This limitation corresponds to “a plurality of client connection ports connected to said virtual local area network switch” recited in claim 1 of the co-pending application. Claim 2 of the pending application recites that “each of the at least one virtual private network connections is uniquely associated with one of said plurality of virtual local area networks, so that a one to one correspondence exists between said at least one virtual private network connection and said plurality of virtual local area networks” which corresponds to the recitation “isolating said plurality of client connection ports from one another so that each of said client connection ports may be connected to at least one of said plurality of secure computer environments on said plurality of computers” in claim 1 of the co-pending application.

Claim 5 of the pending application recites that a configuration engine in the shared computer system configures the at least one virtual private network



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termination device (i.e., switch) which is disclosed in the claim 1 of the co-pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNeil et al. (6,167,052; hereinafter McNeil) in view of Ahmed et al. (5,432,785; hereinafter Ahmed).

#### **Claims 1, 2, 5, and 16**

McNeil discloses methods and systems for establishing network connectivity by creating virtual LANs within a domain (corresponding to the recited shared computer system) (see abstract; Figs 1-2; col. 2, lines 17-29). McNeil discloses shared computer systems such as the network 110 or any of the domains 116P, 116Q, 116R and 116S (see Fig. 1). Any individual computer

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device in these domains corresponds to an application provider or could provide other services to any station in another domain or to a client in the Internet 170.

Referring to Fig. 2, McNeil discloses a plurality of virtual local area networks that can have connections to clients in the Internet 170. McNeil further discloses that each VLAN includes at least one station (corresponding to the recited computer resources) (i.e., associating each station with a VLAN) (see col. 1 lines 30-40 and col. 3, lines 6-16). McNeil also discloses that the computers in different VLANs are connected to at least one switch (corresponding to the recited terminal device) having one or more ports (see Fig. 1 and col. 3, lines 9-30). McNeil discloses the deployment of a management station corresponding to the recited configuration engine connected to at least one switch in order to configure the switches and establishes connectivity between a computer device containing resources in a domain and a client computer over the Internet (see Fig.1, Domain 116P, Station 124M; col. 2, lines 35-50; col. 4, lines 9-11 and lines 38-41; col. 5, lines 1-14). McNeil, however, does not expressly disclose that the clients who are remotely connecting (i.e., over a public network such as Internet) to the stations in VLANs at least through one switch, are associated with at least one virtual private network (VPN) connection.

Ahmed discloses a broadband VPN system in which customers (corresponding to the recited client computers) are connecting to a switching system through at least one VPN connection and connecting to another switching system through a virtual path link within a public network and finally to the desired computer resources (see Figs. 1-4; col. 2, lines 46-67; col. 3, lines 5-67;

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col. 6, lines 3-23). Ahmad further discloses a system to support multiple virtual private networks (VPNs) in a public network by connecting customers in different premises to service providers through private paths (see abstract; Figs. 2-4 and 7-9; col. 4, lines 8-42; col. 10-42). Ahmed also discloses that there ports on the switches for monitoring the traffic on each VPN connection (see col. 3, lines 20-27 and col. 6, lines 40-53). Moreover, as it illustrated by Fig. 4, Ahmed teaches that each customer is associated with at least one VPN connection at the switching system.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to implement the VPN connectivity for each client through at least one switch port to a remote location as taught in Ahmed in the system of McNeil, because it would provide protected virtual private channel connections (corresponding to the recited a one to one correspondence) between clients and computer resources (i.e., isolating the VPNs connections from one another) (col. 3, lines 9-26).

### Claim 3

McNeil discloses that clients from other domains or VPNs can connect to VLANs through one switch (see Fig. 2, where clients that may be associated with a VPN connect to VLANs 140a, 140b and 140c via switch 128.1 shown in Fig. 1). Since the traffic is forwarded either based on the MAC addresses or switch ports, thus, for example, the VPN connections are uniquely associated with one of the VLANs (abstract; col. 2, lines 38-50; col. 3, lines 7-16).

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Claim 4

McNeil discloses a management station corresponding to the recited configuration engine connected to the switch 128.1, in order to configure this switch to provide outside connection to computer resources (i.e., clients VPNs connections to the VLANs) (see, for example, col. 2, lines 35-50 and Fig. 1, Domain 116P, Station 124M, where clients from other domains or via Internet can connect to computers in domain 116P through switch 128.1).

Claims 6 and 19

It is assumed that "configuration engine reading computer requirements from at least one client" means to configure secure environments in portions of the secure computer system according to client needs (page 3 of the specification, lines 32-33). McNeil discloses that connection for client to access resources on the network is restricted and provided based on some criteria (see, for example, col. 1, line 54-col. 2, lines 5; col. 10, lines 15-24).

Claim 7

It is assumed that "configuration engine calculating an optimum allocation of said plurality of computer resources to meet said computer requirements of said at least one client" means that the automating code 74 in the configuration engine 42 (see Fig. 2) may include load balancing systems or brokering systems which receive requests for computer resources 12 from clients and which automatically allocate resources 12 according to client need and priority, and

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resource availability (page 10 of the specification, lines 6-11). McNeil discloses that connection for client to access resources on the network is restricted and provided based on some criteria (see, for example, col. 1, line 54-col. 2, lines 5; col. 10, lines 15-24).

#### Claim 8

This claim is rejected as applied to like elements of claim 3 stated above.

#### Claim 9

Ahmed teaches that the customers connect to the computer resources through a dedicated line (col. 7, lines 1-6).

#### Claims 10 and 11

McNeil discloses that the implemented switches allow users to access resources over the Internet. See, for example, Fig. 1 that users are allowed to access, for example, Station 124.1 over the Internet 170 and through Switch 128.1.

#### Claim 12

Ahmed teaches that customers connect to the resources on the shared computer system with a broadband line connection (see col. 3, line 50-col. 4, line 20).

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Claims 13 and 21

McNeil discloses that management station creates access control lists (ACLs) and allow connections based on the ACLs, which corresponds to the recited authenticating client identification before configuring at least one VLAN (see, for example, col. 2, lines 26-34; col. 3, line 65-col. 4, line 6; col. 6, lines 14-24).

Claims 14, 15 and 20

McNeil discloses that firewalls are also used to further control the access of users to the resources on a shared system and a management station for configuring the domain (see, for example, col. 2, lines 1-5 and lines 35-40; col. 9, lines 32-49).

Claims 17 and 18

McNeil discloses that the management station includes software and provides a graphical user interface for network administrator to configure the VLAN (see, for example, abstract; Fig. 1; col. 4, lines 38-41; col. 9, lines 35-43).

Claim 22

This claim is rejected as applied to the like elements of claim 1 and 16 and further the following:

McNeil discloses a plurality of stations (corresponding to the recited computer resources) scattered in different domains (see Figs. 1-2). The stations

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in each domain are grouped in one or more VLANs (see Figs. 1-2). McNeil further discloses that VLANs are implemented by the LAN switches (col. 1, lines 61-62). Clients from another domain or via Internet access the computer resource in each VLAN through a switch using IP addresses (col. 1, lines 40-53). The IP address is translated to a MAC address by routers normally located at the edge of each network (col. 1, lines 50-53). A switch restricts traffic to a VLAN (col. 1, lines 63-65) and forwards packets based on a station's MAC address only if that station exists in the VLAN (col. 1, lines 46-47 and col. 3, lines 7-9). Furthermore, McNeil discloses that each port of a switch connected to specific segment of the network (col. 3, lines 11-16). Thus, a switch isolates connection of a client to a station in one VLAN from other stations on another VLAN or in the same VLAN that corresponds to the recited securely connecting a client to a portion of shared computer system while isolating that portion from other portions of the system. For example, Fig. 2 illustrates that when a client accesses a resource on VLAN 140a, its connection is isolated from VLAN 140b and VLAN 140c.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory

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period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdulhakim Nobahar whose telephone number is 571-272-3808. The examiner can normally be reached on M-T 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 2, 2005

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